Express Terms
and
Purpose and Rationale Statement
for Work Group 9:M Occupancies
Table 602

EXPRESS TERMS

TABLE 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE[a, e]

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP F-1, M, S-1
$X < 5^{c}$	All	4f
$5 \leq X < 10$	IA Others	2 2f
$10 \leq X < 30$	IA, IB IIB, VB Others	1 1 1
$X \geq 30$	All	0

For SI: 1 foot = 304.8 mm.

a. Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.

b. For special requirements for Group U occupancies see Section 406.1.2

c. See Section 705.1.1 for party walls.

d. Open parking garages complying with Section 406 shall not be required to have a fire-resistance rating.

e. The fire-resistance rating of an exterior wall is determined based upon the fire separation distance of the exterior wall and the story in which the wall is located.

f. Types II and V construction shall be allowed to have a minimum 1 hour fire-resistance rating.

PURPOSE AND RATIONALE STATEMENT

(SFM) The purpose of this proposed amendment is to reasonably maintain the current level of fire/life safety provided by the CBC by increasing the minimum fire-resistance rating requirements for exterior walls based on their fire separation distance as follows:

1. Where the fire separation distance is less than 5 feet, the fire-resistance rating is increased from 2 hours to 4 hours.

2. Where the fire separation distance is at least 5 feet but less than 10 feet, the required fire-resistance rating is increased from 1 hour to 2 hours.
3. Where the fire separation distance is at least 10 feet but less than 30 feet, the required fire-resistance rating is increased from zero to 1 hour for Types IIB and VB construction.

However, a new Footnote f is proposed to be added to Table 602 which allows buildings of Types II and V construction to have a minimum 1 hour fire-resistance rating for fire separation distances less than 10 feet. This results in an actual reduction in the required fire-resistance rating from 2 hours to 1 hour in the 2006 IBC for fire separation distances less than 5 feet for these types of construction which is consistent with the CBC.

The 2006 International Building Code (IBC) Table 602 Fire-Resistance Rating Requirements For Exterior Walls Based on Fire Separation Distance specifies the fire-resistance rating requirements for exterior walls, whether they are bearing or nonbearing, based on their fire separation distance as measured to property lines or imaginary property lines between buildings on the same property. Although this concept is similar to the CBC, the fire-resistance ratings are less. Also factored into the determination of the minimum required fire-resistance ratings of exterior walls is the occupancy classification of the building which relates to the potential fire severity that could occur in the building and thus expose an adjacent building should the fire break out of the windows. This is also similar to the approach taken in CBC Table 5-A. However, because the occupancy classifications of the two codes differ in many respects and because the break points for fire separation distances are different, it is somewhat difficult to make a direct comparison between the IBC and the CBC to see exactly how much less the required fire-resistance ratings are for exterior walls under the IBC as compared to the CBC. Nevertheless, such an analysis will reveal that, in general, the fire resistance ratings of exterior walls in the IBC are less and, in some instances significantly less, than those required in the CBC.

The CBC requires higher fire resistance ratings for exterior non-bearing walls for Types I, II-F.R., III, and IV construction (Types I, III, and IV construction according to the IBC). This change will require those types of construction to have higher fire resistance ratings consistent with the concept of the higher fire resistance ratings for exterior walls in Table 5-A of the CBC. Exterior walls in Types I, III and IV construction have traditionally been required to have these higher fire resistance ratings to protect against exterior fire exposures from adjacent buildings. This is especially important in California where there is a high probability that a significant seismic event will occur in the reasonably foreseeable future. Such an event will most likely rupture municipal water mains and building fires will shortly follow. Without adequate exterior wall fire-resistance where buildings are relatively close to each other, there is a significant potential for building fires to spread to adjacent buildings, resulting in conflagrations. Since the fire departments may not have adequate water supplies to fight such fires, nor may they even be able to gain access to the buildings to conduct their operations due to disruptions caused by the earthquake, the fire resistive protection provided by the exterior walls becomes a very critical factor in preventing mass fires. Furthermore, there

may not even be adequate fire department resources available to fight the many fires that may occur after a severe seismic event, since the fire departments will be stretched thin by the many demands placed on them to respond to the myriad of emergencies that will arise.